REMARKS

Claims 1-17 and 22-24 are all the claims presently pending in the application. Claims 1, 2, 3, 9, 10 and 13-16 have been amended to more particularly define the invention. Claims 18-21 have been canceled and claims 22-24 have been added.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 3, 10 and 14 stand rejected under 35 U.S.C. § 112, second paragraph as being allegedly indefinite. Applicant notes that these claims have been amended to address the Examiner's concerns. In particular, with respect to claim 3, Applicant would point out that claim 3 has been amended to recite "*wherein the image to be processed comprises an image obtained by resizing an input image*" to address the Examiner's concerns. In view of the foregoing, the Examiner is respectfully requested to withdraw this rejection.

Claims 10-11 and 14 stand rejected under 35 U.S.C. § 101 as being allegedly directed to non-patentable subject matter. Applicant notes that these claims have been amended to recite (in pertinent part), "*A computer-readable medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method of detecting whether an image of a characteristic portion exists in an image to be processed, the method comprising...*". In view of the foregoing, the Examiner is respectfully requested to withdraw this rejection.

Claims 1-2, 6, 10 and 14 stand rejected under 35 U.S.C. § 102(b) as being allegedly unpatentable over Kojima et al. (US Patent 5,638,136).

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Bertolussi (US Patent 6,292,575).

Claims 9 and 11 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Kojima in view of Yang et al. (US Patent 6,580,810).

These rejections are respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

An exemplary aspect of the claimed invention (e.g., as recited in claim 1) is directed to a method for detecting whether an image of a characteristic portion exists in an image to be processed. The method includes sequentially cutting images of a required size from the image to be processed, and comparing the cut images with verification data corresponding to the image of the characteristic portion.

Importantly, the method also includes limiting a size range of the image of the characteristic portion with reference to the size of the image to be processed, based on information about a distance between a subject and a location of imaging the subject, obtained when the image to be processed has been photographed, thereby limiting the size of the cut images to be compared with the verification data (Application at Figure 2; page 36, lines 19-24). This may help to reduce a number of times that a comparison is performed, to speed up processing and increase precision.

II. RESPONSE TO REQUIREMENT FOR INFORMATION

In response to the Examiner's Requirement for Information, Applicant would point out that the Examiner's demand is **highly unusual**. Indeed, the Examiner includes **three pages** of questions to which the Examiner demands that Applicant provide answers. Applicant submits that these demands of the Examiner have burdened Applicant with **additional and unnecessary time and cost** in preparing a response to the Office Action.

Therefore, although Applicant has fully complied with the Examiner's demands, Applicant would respectfully request that the Examiner **explain in detail** in the next Office Communication why the Examiner is making such an **unusual and burdensome** demand for information of Applicant. In particular, Applicant would request that the Examiner state **whether the Examiner possesses some information** that has caused the Examiner to single out this Application for particular scrutiny by the Examiner, **and if so provide such information to Applicant** so that Applicant may have an opportunity to address such information.

In response, Applicant states as follows:

1. No.
2. No.

3. No.

4. Yes. Applicant filed the present Application in the United States.

5. Yes. Applicant filed the present Application in the United States.

6. Yes. Applicant filed the present Application in the United States.

7. The present Application is currently being examined by the Examiner.

8. The present Application is currently being examined by the Examiner.

9. The present Application is currently being examined by the Examiner.

10. The Examiner **surprisingly accuses Applicant of mischaracterizing the prior art** on pages 1-2 of the present Application. Applicant would point out to the Examiner that **his accusation is very serious and should not be carelessly made by the Examiner** without evidence to support his accusation.

Applicant respectfully submits that Applicant's characterization of the prior art is accurate and not misleading. On pages 1-2 of the specification, Applicant accurately describes the prior art as follows:

A. Some digital cameras are equipped with an auto focusing device which extracts a face portion of a subject and automatically sets the focus of the digital camera on eyes of the thus-extracted face portion;

B. JP-2001-A-215403 describes only a technique for achieving focus;

C. JP-2001-A-215403 fails to provide descriptions about the method of extracting the face portion of the subject, which method enables high-speed extraction of a face image.

D. In the related art, when a face portion is extracted from the screen, template matching is employed. Specifically, the degree of similarity between images sequentially cut off from an image of a subject by means of a search window and a face template is sequentially determined. The face of the subject is determined to be situated at the position of the search window where the cut image coincides with the face template at a threshold degree of similarity or more;

E. In the related art, when the template matching is performed, the size at which the face of the subject appears on a screen is uncertain. Therefore, a plurality of templates of different sizes ranging from a small face template to a face template filling the screen are prepared beforehand and stored in a memory device, and template matching is performed through use of all templates, to thus extract a face image.

The Examiner attempts to support his meritless accusation by asserting that the prior

art section of JP 2001-215403 "cites other references that seem to do exactly this" (presumably referring to a method of extracting a face portion of a subject which enables high-speed extraction of a face image). The Examiner then surprisingly demands that Applicant "disclose each reference cited in Japan 2001-215403".

That is, the Examiner is demanding that Applicant disclose to him a list of references of which the Examiner clearly has knowledge. Applicant respectfully submits that it is not "necessary" for Applicant to provide this information, but for the convenience of the Examiner, Applicant responds to the Examiner's demands as follows:

The references cited in JP 2001-215403 include: JP 4-67607, JP App. No. 5-278433, JP 52-156624, JP 53-145621, JP 53-145622, JP 4-346333, JP 8-063597, JP 9-251534, and JP 10-232934. In fact, although Applicant does not believe that these references are material to patentability of the claimed invention, again for the Examiner's convenience, Applicant concurrently files herewith an Information Disclosure Statement including copies of these references.

III. THE ALLEGED PRIOR ART REFERENCES

A. Kojima

The Examiner alleges that Kojima anticipates the invention of claims 1-2, 6, 10 and 14. Applicant submits, however, that there are features of the claimed invention that are not taught or suggested by Kojima.

Kojima discloses a method of flesh-tone area detection which is intended to selectively detect a flesh-tone area using simple circuitry (Kojima at Abstract; col. 5, lines 62-64).

However, Applicant submits that Kojima does not teach or suggest *"limiting a size range of the image of the characteristic portion with reference to the size of the image to be processed, based on information about a distance between a subject and a location of imaging the subject, obtained when the image to be processed has been photographed, thereby limiting the size of the cut images to be compared with the verification data"*, as recited, for example, in claim 1(Application at Figure 2; page 36, lines 19-24). As noted above, this may help to reduce a number of times that a comparison is performed, to speed up processing and increase precision.

Clearly, this feature is not taught or suggested by Kojima. Indeed, the Examiner attempts to rely on Figure 109 to support his position that Kojima teaches this feature. The Examiner is incorrect.

Indeed, Figure 109 in Kojima simply discloses "calculation of object distance" and "calculation of focal length Z". Moreover, Kojima states that "[b]ased on the object distance L and focal length Z, and using the following expression 11, the microcomputer 31 determines a range RA, as shown in FIG. 110, with which to detect the width of a human face" (Kojima at col. 42, lines 53-65).

That is, nowhere in this passage or anywhere else does Kojima teach or suggest limiting a size range of the image of the characteristic portion (e.g., a size of a search window) with reference to the size of the image to be processed, based on information about a distance between a subject and a location of imaging the subject, obtained when the image to be processed has been photographed, thereby limiting the size of the cut images to be compared with the verification data, as in the claimed invention.

Therefore, Applicant submits that there are features of the claimed invention that are not taught or suggested by Kojima. Therefore, the Examiner is respectfully requested to withdraw this rejection.

B. Bertolussi

The Examiner alleges that Bertolussi makes obvious the invention of claim 3. Applicant submits, however, that there are features of the claimed invention that are not taught or suggested by Bertolussi.

Bertolussi discloses a facial recognition and verification method which is intended to compare an image with a stored image and determine if a match exists in real time. The method employs a motion detection stage, blob stage and a color matching stage at the input to localize a region of interest in an image (Bertolussi at col. 1, line 66-col. 2, line 10).

However, Applicant submits that Bertolussi, like Kojima, does not teach or suggest *"limiting a size range of the image of the characteristic portion with reference to the size of the image to be processed, based on information about a distance between a subject and a location of imaging the subject, obtained when the image to be processed has been photographed, thereby limiting the size of the cut images to be compared with the verification*

data", as recited, for example, in claim 1 (Application at Figure 2; page 36, lines 19-24). As noted above, this may help to reduce a number of times that a comparison is performed, to speed up processing and increase precision.

Clearly, this feature is not taught or suggested by Bertolussi. Indeed, the Examiner attempts to rely on Figure 5 and col. 9, lines 33-50 to support his position. The Examiner is incorrect.

Indeed, these passages in Bertolussi simply teach scaling eigenheads to various sizes to enable a correlation match. Nowhere in this passage or anywhere else does Bertolussi teach or suggest limiting a size range of the image of the characteristic portion (e.g., a size of a search window) with reference to the size of the image to be processed, based on information about a distance between a subject and a location of imaging the subject, obtained when the image to be processed has been photographed, thereby limiting the size of the cut images to be compared with the verification data, as in the claimed invention.

Therefore, Applicant submits that there are features of the claimed invention that are not taught or suggested by Bertolussi. Therefore, the Examiner is respectfully requested to withdraw this rejection.

C. Yang

The Examiner alleges that Kojima would have been combined with Yang to form the invention of claims 9 and 11. Applicant submits, however, that these alleged references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention.

Yang discloses a method of images processing in three dimensional head motion tracking which includes tracking three facial feature points corresponding to consecutive video frames (Yang at Abstract).

However, Applicant submits that these alleged references are unrelated. Clearly, no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

Therefore, no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight. Therefore, Applicant respectfully submits that it **clearly would not have been obvious to try to combine** these disparate

references by one of ordinary skill in the art, and the Examiner has failed to make a prima facie case of obviousness.

Moreover, neither Kojima, nor Yang, nor any alleged combination teaches or suggests *"limiting a size range of the image of the characteristic portion with reference to the size of the image to be processed, based on information about a distance between a subject and a location of imaging the subject, obtained when the image to be processed has been photographed, thereby limiting the size of the cut images to be compared with the verification data"*, as recited, for example, in claim 1 (Application at Figure 2; page 36, lines 19-24). As noted above, this may help to reduce a number of times that a comparison is performed, to speed up processing and increase precision.

Clearly, this feature is not taught or suggested by Yang. Indeed, the Examiner attempts to rely on Figures 7A-7B to support his position. The Examiner is incorrect.

Indeed, these drawings simply illustrate a relation between two consecutive video frames (Yang at col. 3, lines 49-50). Yang simply teaches that the search window 75 is smaller than the correlation window 77 (Yang at col. 7, lines 1-14). Nowhere in this passage or anywhere else does Yang teach or suggest limiting a size range of the image of the characteristic portion (e.g., a size of a search window) with reference to the size of the image to be processed, based on information about a distance between a subject and a location of imaging the subject, obtained when the image to be processed has been photographed, thereby limiting the size of the cut images to be compared with the verification data, as in the claimed invention.

Thus, Yang is unrelated to the claimed invention and does not make up for the deficiencies of Kojima.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention. Therefore, Applicant respectfully request that the Examiner withdraw this rejection.

III. FORMAL MATTERS AND CONCLUSION

Applicant notes that the drawings have been amended to address the Examiner's objections thereto. With respect to the limitation of claim 3, Applicant would again point out

that claim 3 has been amended to recite "*wherein the image to be processed comprises an image obtained by resizing an input image*", which is clearly depicted in the drawings. For example, Figure 3 depicts a processing image 21 (e.g., a resized image) which is discussed in the Application at page 18, third paragraph to page 19, first paragraph.

Applicant notes that the title and the specification have been amended to address the Examiner's objections thereto. With respect to the term "α", Applicant submits that nowhere is this term mistakenly identified by the letter "a" in the specification.

In view of the foregoing, Applicant submits that claims 1-17 and 22-24, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 11/13/07

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